

SAFETY DATA SHEET



Date of issue 9 December 2025

Version 9

Section 1. Identification

Chemical name : SIGMARINE 28 RED BROWN 2008

GHS product identifier : SIGMARINE 28 RED BROWN 2008

Code : 40028-C2008/20L

Relevant identified uses of the substance or mixture and uses advised against

Product use : Coating.
Professional applications, Used by spraying.

Supplier's details : PPG Industries International Inc. Taiwan Branch.
No.209, Hong Tzuenn Rd Ping Chen City, Taoyuan County, Taiwan
Tel: 886 3 3663922
886 3 3751639 (Automotive OEM Coatings Products).
Fax: 886 3 2182667

Emergency telephone number : +886-3-3663922
+886-911998320

Section 2. Hazards identification

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (dermal) - Category 5
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
AQUATIC TOXICITY (ACUTE) - Category 3
AQUATIC TOXICITY (CHRONIC) - Category 3
Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 70.2%
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 24.9%

GHS label elements

Hazard pictograms :



Signal word : Danger

Section 2. Hazards identification

- Hazard statements** : Flammable liquid and vapor.
May be harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.
- Precautionary statements**
- Prevention** : Obtain, read and follow all safety instructions before use. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
- Response** : If exposed or concerned, get medical advice. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water. IF ON SKIN: Get medical help. Wash with plenty of water. If skin irritation occurs: Get medical help. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help. Get medical help if you feel unwell.
- Storage** : Store locked up.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Other hazards which do not result in classification** : Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Hazardous ingredients	% (w/w)	CAS no.	Type
<input checked="" type="checkbox"/> Xylene	≥20 - ≤25	1330-20-7	[1] [2]
Talc , not containing asbestiform fibres	≥5 - ≤10	14807-96-6	[1] [2]
ethylbenzene	≥3 - ≤5	100-41-4	[1] [2] [3]
trizinc bis(orthophosphate)	≥0.3 - ≤1	7779-90-0	[1]
2-butanone oxime	≤0.3	96-29-7	[1]
Hazardous ingredients	% (w/w)	CAS number	Type
<input checked="" type="checkbox"/> Xylene	≥20 - ≤25	1330-20-7	[1] [2]
Talc (Mg ₃ H ₂ (SiO ₃) ₄)	≥5 - ≤10	14807-96-6	[1] [2]
ethylbenzene	≥3 - ≤5	100-41-4	[1] [2] [3]
trizinc bis(orthophosphate)	≥0.3 - ≤1	7779-90-0	[1]
2-butanone oxime	≤0.3	96-29-7	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

Section 3. Composition/information on ingredients

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Toxic chemical substance

Occupational exposure limits, if available, are listed in Section 8.

SUB codes represent substances without registered CAS Numbers.

Section 4. First aid measures

Description of necessary first aid measures

- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May be harmful in contact with skin. Causes skin irritation. Defatting to the skin.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary


- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Section 4. First aid measures

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Specific hazards arising from the chemical** :  Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
- Methods and materials for containment and cleaning up**
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 6. Accidental release measures

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

- Precautions for safe handling** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting, self-closing lids. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside.
- Conditions for safe storage, including any incompatibilities** : Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
xylene	TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018) [xylenes] STEL 15 minutes: 125 ppm. STEL 15 minutes: 542.5 mg/m ³ . TWA 8 hours: 100 ppm. TWA 8 hours: 434 mg/m ³ .
Talc , not containing asbestiform fibres	TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018)

Section 8. Exposure controls/personal protection

ethylbenzene

STEL 15 minutes: 4 mg/m³.TWA 8 hours: 2 mg/m³.

TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018)

STEL 15 minutes: 125 ppm.

STEL 15 minutes: 542.5 mg/m³.

TWA 8 hours: 100 ppm.

TWA 8 hours: 434 mg/m³.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Not recommended: nitrile rubber

Recommended: polyvinyl alcohol (PVA), Viton®

Skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection : Chemical splash goggles.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 9. Physical and chemical properties

Appearance

Physical state	: Liquid.				
Color	: Red.				
Odor	: Aromatic.				
Odor threshold	: Not available.				
pH	: Not applicable.				
Melting point	: Not available.				
Boiling point	: >37.78°C (>100°F)				
Flash point	: Closed cup: 25°C (77°F)				
Flammability (solid, gas)	: Not available.				
Burning time	: Not applicable.				
Burning rate	: Not applicable.				
Decomposition temperature	: Not available.				
Evaporation rate	: Not available.				
Lower and upper explosive (flammable) limits	: Not available.				
Vapor pressure	: Not available.				
Vapor density	: Not available.				
Relative density	: 1.38				
Bulk Density (g/cm ³)	: 1.48				
Solubility(ies)	: <table border="1" data-bbox="513 1054 1511 1159"> <thead> <tr> <th>Media</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>cold water</td> <td>Not soluble</td> </tr> </tbody> </table>	Media	Result	cold water	Not soluble
Media	Result				
cold water	Not soluble				
Partition coefficient: n-octanol/water	: Not applicable.				
Auto-ignition temperature	: Not available.				
Viscosity	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C): >21 mm ² /s				

Section 10. Stability and reactivity

Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products.
Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
Hazardous decomposition products	: Depending on conditions, decomposition products may include the following materials: carbon oxides metal oxide/oxides

Section 10. Stability and reactivity

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Xylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
trizinc bis(orthophosphate)	LC50 Inhalation Dusts and mists	Rat	>5.7 mg/l	4 hours
	LD50 Oral	Rat	>5000 mg/kg	-
2-butanone oxime	LD50 Dermal	Rabbit	1100 mg/kg	-
	LD50 Oral	Rat	100 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Talc (Mg ₃ H ₂ (SiO ₃) ₄)	Category 3	-	Respiratory tract irritation
-	Category 3	-	Narcotic effects
2-butanone oxime	Category 1	-	upper respiratory tract
-	Category 3	-	Narcotic effects

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Xylene	Category 1	-	-
ethylbenzene	Category 2	-	hearing organs
2-butanone oxime	Category 2	-	blood system

Aspiration hazard

Name	Result
Xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin contact : May be harmful in contact with skin. Causes skin irritation. Defatting to the skin.

Eye contact : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Section 11. Toxicological information

Potential chronic health effects

Not available.

General	: Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Carcinogenicity	: May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	: No known significant effects or critical hazards.
Reproductive toxicity	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Eye contact	: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
SIGMARINE 28 RED BROWN 2008	13773.1	2424.8	N/A	69.2	24.5
Xylene	4300	1700	N/A	N/A	N/A
Talc (Mg ₃ H ₂ (SiO ₃) ₄)	N/A	N/A	N/A	11	N/A
ethylbenzene	3500	17800	N/A	17.8	1.5
2-butanone oxime	100	1100	N/A	N/A	N/A

Other information

: Prolonged or repeated contact may dry skin and cause irritation. Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	-
trizinc bis(orthophosphate)	Acute LC50 0.112 mg/l	Fish	96 hours
	Chronic NOEC 0.026 mg/l	Fish	30 days

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
ethylbenzene	-	79 % - Readily - 10 days	-	-

Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Xylene ethylbenzene	- -	- -	Readily Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Xylene	3.12	7.4 to 18.5	Low
ethylbenzene	3.6	79.43	Low
2-butanone oxime	0.63	5.01 [OECD 305 C]	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3
Packing group	III	III	III
Environmental hazards	No.	No.	No.

Section 14. Transport information

Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.
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Additional information

UN : None identified.
IMDG : None identified.
IATA : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not applicable.

Section 15. Regulatory information

TCCSCA List of toxic chemicals

Not applicable.

TCCSCA List of concerned chemicals

Not applicable.

Regulations Applicable:

1. Rules for Occupational Safety and Health Facilities
2. Regulations for the Labeling and Hazard Communication of Hazardous Chemicals
3. Prevention Rules for Organic Solvent Intoxication/Poisoning
4. Standards of Permissible Exposure Limits of Airborne Hazardous Substances in Workplace
5. Traffic Safety Regulation of Road
6. Regulation for Governing, Designating and Handling of Priority Management Chemicals

Section 16. Other information

References	Not available.	
Organization that prepared the SDS	Name: PPG Industries International Inc., Taiwan Branch	
	Address / Telephone : No. 209, Hong Tzuenn Rd. Ping Chen City, Taoyuan County, Taiwan +886-3-3663922 +886-911998320	
Person who prepared the SDS	Title: Technical manager	Name: (Signature): Tony Cheng
	Date of issue 9 December 2025	

Date of previous issue : 4/24/2025

Section 16. Other information

Version : 9

Indicates information that has changed from previously issued version.

Remarks : New SDS layout incorporating TW Table 2017

Key to abbreviations : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
UN = United Nations

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.